



# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id

**947754**

Component

**Hydraulic System**

Fluid

**R&O OIL ISO 32 (--- GAL)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Please note that this is a corrected copy for requested laboratory data for water content.

### Wear

All component wear rates are normal.

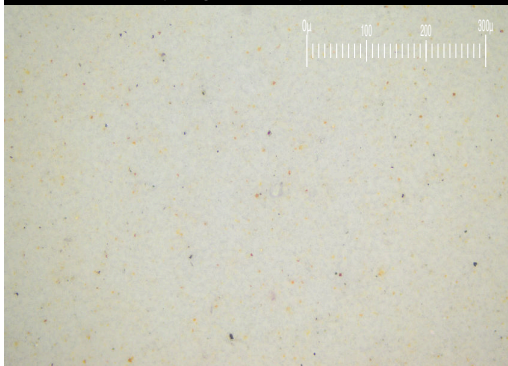
### Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible.

### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Particle Filter (Magn: 200 x)



## SAMPLE INFORMATION

| method        | limit/base      | current            | history1 | history2 |
|---------------|-----------------|--------------------|----------|----------|
| Sample Number | Client Info     | <b>PH0000322</b>   | ---      | ---      |
| Sample Date   | Client Info     | <b>25 Mar 2024</b> | ---      | ---      |
| Machine Age   | hrs Client Info | <b>0</b>           | ---      | ---      |
| Oil Age       | hrs Client Info | <b>0</b>           | ---      | ---      |
| Oil Changed   | Client Info     | <b>Filtered</b>    | ---      | ---      |
| Sample Status |                 | <b>ABNORMAL</b>    | ---      | ---      |

## WEAR METALS

| method       | limit/base      | current      | history1 | history2 |
|--------------|-----------------|--------------|----------|----------|
| Iron ppm     | ASTM D5185m >20 | <b>4</b>     | ---      | ---      |
| Chromium ppm | ASTM D5185m >20 | <b>&lt;1</b> | ---      | ---      |
| Nickel ppm   | ASTM D5185m >20 | <b>2</b>     | ---      | ---      |
| Titanium ppm | ASTM D5185m     | <b>&lt;1</b> | ---      | ---      |
| Silver ppm   | ASTM D5185m     | <b>0</b>     | ---      | ---      |
| Aluminum ppm | ASTM D5185m >20 | <b>2</b>     | ---      | ---      |
| Lead ppm     | ASTM D5185m >20 | <b>3</b>     | ---      | ---      |
| Copper ppm   | ASTM D5185m >20 | <b>3</b>     | ---      | ---      |
| Tin ppm      | ASTM D5185m >20 | <b>1</b>     | ---      | ---      |
| Vanadium ppm | ASTM D5185m     | <b>&lt;1</b> | ---      | ---      |
| Cadmium ppm  | ASTM D5185m     | <b>&lt;1</b> | ---      | ---      |

## ADDITIVES

| method         | limit/base       | current      | history1 | history2 |
|----------------|------------------|--------------|----------|----------|
| Boron ppm      | ASTM D5185m 5    | <b>0</b>     | ---      | ---      |
| Barium ppm     | ASTM D5185m 5    | <b>0</b>     | ---      | ---      |
| Molybdenum ppm | ASTM D5185m 5    | <b>&lt;1</b> | ---      | ---      |
| Manganese ppm  | ASTM D5185m      | <b>&lt;1</b> | ---      | ---      |
| Magnesium ppm  | ASTM D5185m 5    | <b>&lt;1</b> | ---      | ---      |
| Calcium ppm    | ASTM D5185m 5    | <b>7</b>     | ---      | ---      |
| Phosphorus ppm | ASTM D5185m 100  | <b>10</b>    | ---      | ---      |
| Zinc ppm       | ASTM D5185m 25   | <b>11</b>    | ---      | ---      |
| Sulfur ppm     | ASTM D5185m 1500 | <b>1709</b>  | ---      | ---      |

## CONTAMINANTS

| method        | limit/base       | current      | history1 | history2 |
|---------------|------------------|--------------|----------|----------|
| Silicon ppm   | ASTM D5185m >15  | <b>1</b>     | ---      | ---      |
| Sodium ppm    | ASTM D5185m      | <b>&lt;1</b> | ---      | ---      |
| Potassium ppm | ASTM D5185m >20  | <b>2</b>     | ---      | ---      |
| Water %       | ASTM D6304 >0.05 | <b>0.005</b> | ---      | ---      |
| ppm Water ppm | ASTM D6304 >500  | <b>54</b>    | ---      | ---      |

## FLUID CLEANLINESS

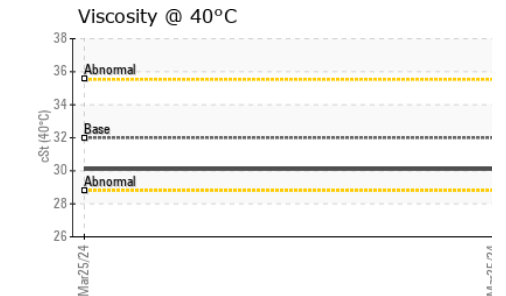
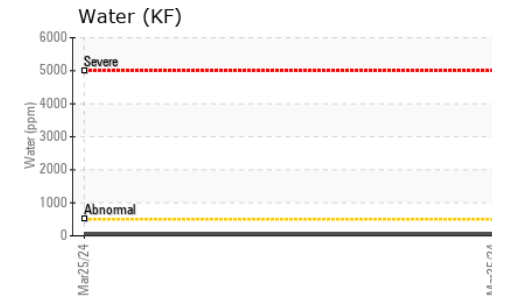
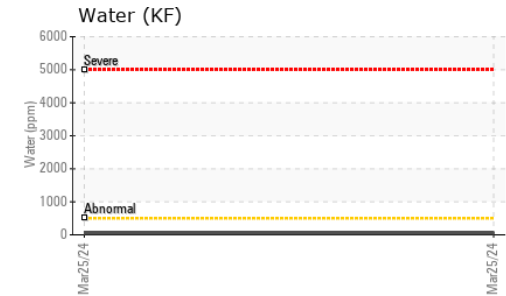
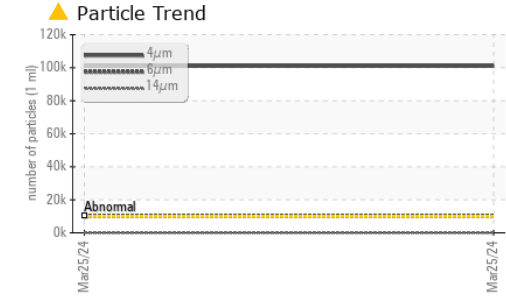
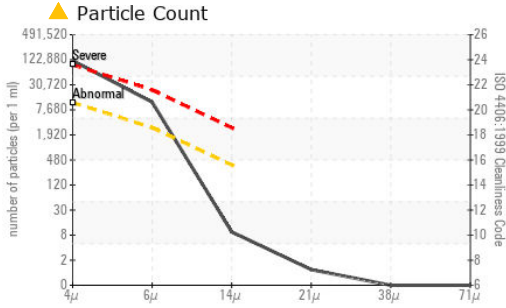
| method          | limit/base             | current           | history1 | history2 |
|-----------------|------------------------|-------------------|----------|----------|
| Particles >4µm  | ASTM D7647 >10000      | <b>▲ 100943</b>   | ---      | ---      |
| Particles >6µm  | ASTM D7647 >2500       | <b>▲ 10234</b>    | ---      | ---      |
| Particles >14µm | ASTM D7647 >320        | <b>8</b>          | ---      | ---      |
| Particles >21µm | ASTM D7647 >80         | <b>1</b>          | ---      | ---      |
| Particles >38µm | ASTM D7647 >20         | <b>0</b>          | ---      | ---      |
| Particles >71µm | ASTM D7647 >4          | <b>0</b>          | ---      | ---      |
| Oil Cleanliness | ISO 4406 (c) >20/18/15 | <b>▲ 24/21/10</b> | ---      | ---      |

## FLUID DEGRADATION

| method                    | limit/base      | current     | history1 | history2 |
|---------------------------|-----------------|-------------|----------|----------|
| Acid Number (AN) mg KOH/g | ASTM D8045 0.08 | <b>0.11</b> | ---      | ---      |



# OIL ANALYSIS REPORT

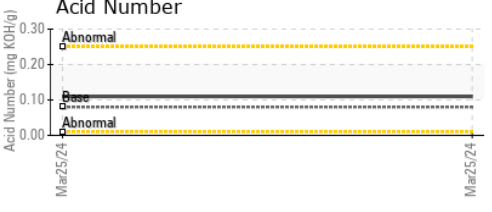
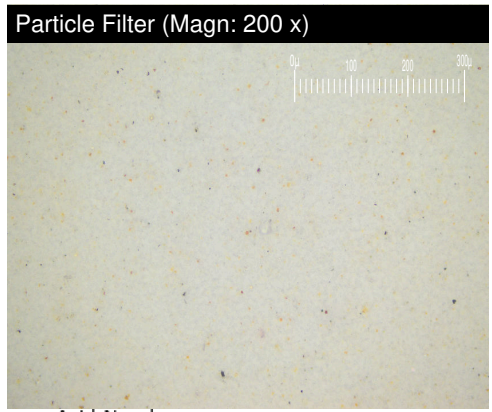
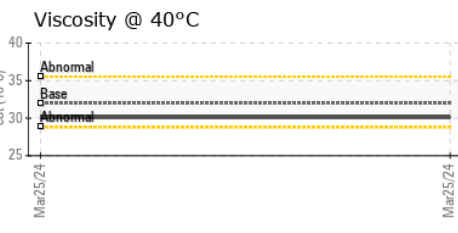
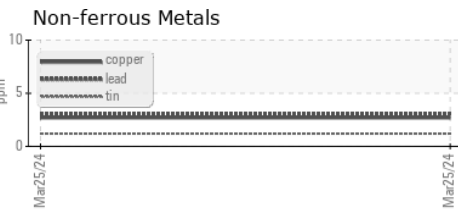
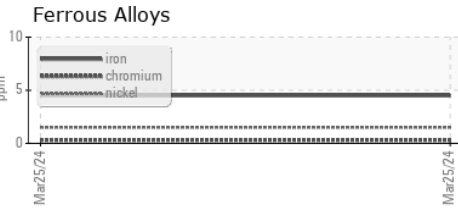


| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | ---      |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | ---      |
| Precipitate      | scalar | *Visual    | NONE    | NONE     | ---      |
| Silt             | scalar | *Visual    | NONE    | NONE     | ---      |
| Debris           | scalar | *Visual    | NONE    | NONE     | ---      |
| Sand/Dirt        | scalar | *Visual    | NONE    | NONE     | ---      |
| Appearance       | scalar | *Visual    | NORML   | NORML    | ---      |
| Odor             | scalar | *Visual    | NORML   | NORML    | ---      |
| Emulsified Water | scalar | *Visual    | >0.05   | NEG      | ---      |
| Free Water       | scalar | *Visual    |         | NEG      | ---      |

| FLUID PROPERTIES | method | limit/base   | current | history1 | history2 |
|------------------|--------|--------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445 32 | 30.1    | ---      | ---      |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
| Color         |        |            |         | no image | no image |
| Bottom        |        |            |         | no image | no image |
| PrtFilter     |        |            |         | no image | no image |

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PH0000322 **Received** : 01 Apr 2024  
**Lab Number** : 06135610 **Tested** : 10 Apr 2024  
**Unique Number** : 10955075 **Diagnosed** : 10 Apr 2024 - Doug Bogart  
**Test Package** : PLANT ( Additional Tests: KF, PrtFilter )

**ALLTECH ENGINEERING CORP**  
 2515 PILOT KNOB RD  
 MENDOTA HEIGHTS, MN  
 US 55120  
 Contact: JAKE ANDERSON  
 janderson@alltechengineering.com  
 T: (715)607-0738  
 F:

To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)